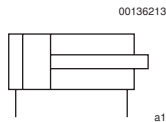


## Piston rod cylinders → Short-stroke and compact cylinders

### Series KHZ

► Ø 12 - 63 mm ► Ports: M5 - G 1/8 ► double-acting ► cushioning: elastic



|  |                   |
|--|-------------------|
| Ambient temperature min./max.          | -25 °C / +80 °C   |
| Medium temperature min./max.           | -25 °C / +80 °C   |
| Medium                                 | Compressed air    |
| Max. particle size                     | 50 µm             |
| Oil content of compressed air          | 0 mg/m³ - 5 mg/m³ |
| Pressure for determining piston forces | 6,3 bar           |

|               |                    |
|---------------|--------------------|
| Materials:    |                    |
| Cylinder tube | Aluminum, anodized |
| Piston rod    | Stainless steel    |
| Piston        | Nitrile rubber     |
| End cover     | Aluminum           |
| Scraper       | Polyurethane       |

#### Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.

| Piston Ø                   |               | [mm]  | 12     | 16     | 20     | 25     | 32       |
|----------------------------|---------------|-------|--------|--------|--------|--------|----------|
| Retracting piston force    |               | [N]   | 53     | 95     | 148    | 260    | 435      |
| Extending piston force     |               | [N]   | 71     | 127    | 198    | 309    | 507      |
| Impact energy              |               | [J]   | 0.04   | 0.01   | 0.08   | 0.1    | 0.16     |
| Weight                     | 0 mm stroke   | [kg]  | 0.036  | 0.063  | 0.082  | 0.164  | 0.195    |
|                            | +10 mm stroke | [kg]  | 0.048  | 0.083  | 0.108  | 0.198  | 0.249    |
| Working pressure min./max. |               | [bar] | 1 - 10 | 1 - 10 | 1 - 10 | 1 - 10 | 0.6 - 10 |
| Note                       |               |       | 1)     | 1)     | 1)     | 1)     | 2)       |

| Piston Ø                   |               | [mm]  | 40       | 50       | 63       |  |  |
|----------------------------|---------------|-------|----------|----------|----------|--|--|
| Retracting piston force    |               | [N]   | 720      | 1110     | 1837     |  |  |
| Extending piston force     |               | [N]   | 792      | 1237     | 1964     |  |  |
| Impact energy              |               | [J]   | 0.24     | 0.32     | 0.38     |  |  |
| Weight                     | 0 mm stroke   | [kg]  | 0.285    | 0.388    | 0.636    |  |  |
|                            | +10 mm stroke | [kg]  | 0.337    | 0.458    | 0.726    |  |  |
| Working pressure min./max. |               | [bar] | 0.6 - 10 | 0.6 - 10 | 0.6 - 10 |  |  |
| Note                       |               |       | 2)       | 2)       | 2)       |  |  |


1) Material front cover: Brass

2) Material front cover: Aluminum

## Piston rod cylinders → Short-stroke and compact cylinders

## Series KHZ

► Ø 12 - 63 mm ► Ports: M5 - G 1/8 ► double-acting ► cushioning: elastic

|  | Piston Ø<br>Piston rod thread<br>Ports<br>Piston rod thread - type | 12   | 16                                   | 20                                   | 25                                   | 32                             |  |
|--|--|--|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------|--|
|  |  | M5<br>external thread  | M5<br>internal thread                | M5<br>internal thread                | M5<br>G 1/8<br>internal thread       | M6<br>G 1/8<br>internal thread |  |
|  | Stroke 5   | <b>0822010500</b>  | <b>0822010510</b>                    | <b>0822010520</b>                    | <b>0822010530</b>                    | <b>0822010540</b>              |  |
|  | 10   | <b>0822010501</b>  | <b>0822010511</b>                    | <b>0822010521</b>                    | <b>0822010531</b>                    | <b>0822010541</b>              |  |
|  | 15   | <b>0822010502</b>  | <b>0822010512</b>                    | <b>0822010522</b>                    | <b>0822010532</b>                    | <b>0822010542</b>              |  |
|  | 20   | <b>0822010503</b>  | <b>0822010513</b>                    | <b>0822010523</b>                    | <b>0822010533</b>                    | <b>0822010543</b>              |  |
|  | 25   | <b>0822010504</b>  | <b>0822010514</b>                    | <b>0822010524</b>                    | <b>0822010534</b>                    | <b>0822010544</b>              |  |
|  | 30   | <b>0822010505</b>  | <b>0822010515</b>                    | <b>0822010525</b>                    | <b>0822010535</b>                    | <b>0822010545</b>              |  |
|  | 40   | <b>0822010506</b>  | <b>0822010516</b>                    | <b>0822010526</b>                    | <b>0822010536</b>                    | <b>0822010546</b>              |  |
|  | 50   | -  | -                                    | <b>0822010527</b>                    | <b>0822010537</b>                    | <b>0822010547</b>              |  |
|  |  | Piston Ø<br>Piston rod thread<br>Ports<br>Piston rod thread - type | 40<br>M6<br>G 1/8<br>internal thread | 50<br>M8<br>G 1/8<br>internal thread | 63<br>M8<br>G 1/8<br>internal thread |                                |  |
|  | Stroke 5   | <b>0822010550</b>  | -                                    | <b>0822010570</b>                    |                                      |                                |  |
|  | 10   | <b>0822010551</b>  | <b>0822010561</b>                    | <b>0822010571</b>                    |                                      |                                |  |
|  | 15   | <b>0822010552</b>  | <b>0822010562</b>                    | <b>0822010572</b>                    |                                      |                                |  |
|  | 20   | <b>0822010553</b>  | <b>0822010563</b>                    | <b>0822010573</b>                    |                                      |                                |  |
|  | 25   | <b>0822010554</b>  | <b>0822010564</b>                    | <b>0822010574</b>                    |                                      |                                |  |
|  | 30   | <b>0822010555</b>  | <b>0822010565</b>                    | <b>0822010575</b>                    |                                      |                                |  |
|  | 40   | <b>0822010556</b>  | <b>0822010566</b>                    | <b>0822010576</b>                    |                                      |                                |  |
|  | 50   | <b>0822010557</b>  | <b>0822010567</b>                    | <b>0822010577</b>                    |                                      |                                |  |

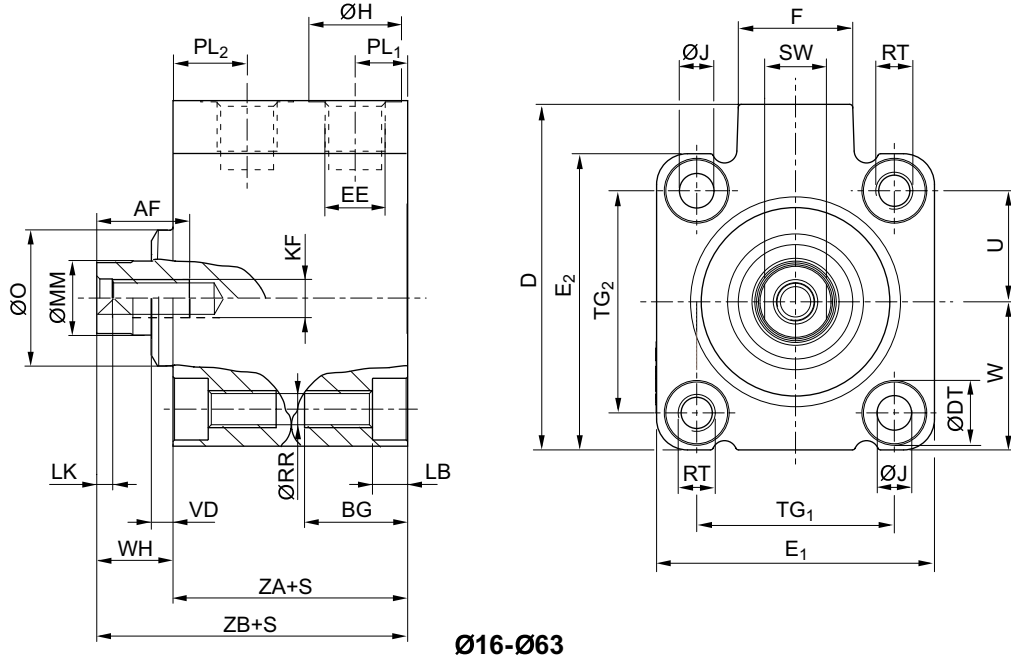
other versions can be ordered from Bosch Rexroth sales offices

Piston rod cylinders → Short-stroke and compact cylinders

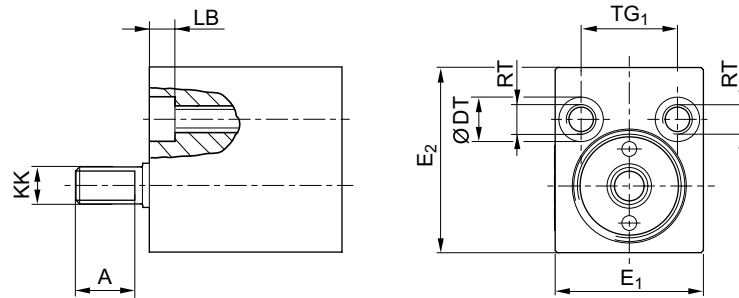
Series KHZ

► Ø 12 - 63 mm ► Ports: M5 - G 1/8 ► double-acting ► cushioning: elastic

Dimensions



Ø16-Ø63



Ø12

S = stroke

00106561

| Piston Ø | S       | A | AF<br>+1 | BG <sup>1)</sup> | D<br>JS15 | ØDT<br>H13 | E1<br>JS15 | E2<br>JS15 | EE    | F    | ØH | ØJ   | KF  |
|----------|---------|---|----------|------------------|-----------|------------|------------|------------|-------|------|----|------|-----|
| 12       | 5 - 20  | 8 | -        | 12.4             | -         | 6          | 20         | 25         | M 5   | -    | 8  | -    | -   |
| 12       | 25 - 40 | 8 | -        | 17.5             | -         | 6          | 20         | 25         | M 5   | -    | 8  | -    | -   |
| 16       | 5 - 15  | - | 10       | 12.4             | 33        | 6          | 28         | 28         | M 5   | 11.5 | 8  | 3.55 | M 5 |
| 16       | 20 - 40 | - | 10       | 17.5             | 33        | 6          | 28         | 28         | M 5   | 11.5 | 8  | 3.55 | M 5 |
| 20       | 5 - 50  | - | 10       | 13.6             | 37        | 7.5        | 32         | 32         | M 5   | 11   | 8  | 4.55 | M 5 |
| 25       | 5 - 50  | - | 10       | 13.6             | 47.5      | 8          | 37         | 39         | G 1/8 | 17.5 | 15 | 4.55 | M 5 |
| 32       | 5 - 50  | - | 15       | 16.7             | 56        | 10         | 45         | 48         | G 1/8 | 18.5 | 15 | 5.5  | M 6 |
| 40       | 5 - 50  | - | 15       | 16.7             | 62.5      | 10         | 54.5       | 54.5       | G 1/8 | 18.5 | 15 | 5.5  | M 6 |
| 50       | 10 - 50 | - | 18       | 19.8             | 72        | 11         | 64         | 64         | G 1/8 | 18   | 15 | 7.3  | M 8 |
| 63       | 10 - 50 | - | 18       | 25               | 88        | 15         | 80         | 80         | G 1/8 | 23   | 15 | 9.2  | M 8 |

| Piston Ø | KK  | LB<br>+0,4 | LK<br>+0,5 | ØMM<br>f8 | ØO | PL1 | PL2 | ØRR | RT  | SW<br>-0,3 | TG1<br>±0,2 | TG2<br>±0,2 | U |
|----------|-----|------------|------------|-----------|----|-----|-----|-----|-----|------------|-------------|-------------|---|
| 12       | M 5 | 3.4        | -          | 6         | -  | 6   | 9.5 | 3.3 | M 4 | -          | 13          | -           | 9 |

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for detailed information Pneumatics catalog, online PDF, as of 2010-02-11, © Bosch Rexroth AG, subject to change

## Piston rod cylinders → Short-stroke and compact cylinders

## Series KHZ

► Ø 12 - 63 mm ► Ports: M5 - G 1/8 ► double-acting ► cushioning: elastic

| Piston Ø | KK  | LB<br>+0,4 | LK<br>+0,5 | ØMM<br>f8 | ØO | PL1 | PL2  | ØRR  | RT   | SW<br>-0,3 | TG1<br>±0,2 | TG2<br>±0,2 | U  |
|----------|-----|------------|------------|-----------|----|-----|------|------|------|------------|-------------|-------------|----|
| 12       | M 5 | 8.5        | -          | 6         | -  | 6   | 9.5  | 3.3  | M 4  | -          | 13          | -           | 9  |
| 16       | -   | 3.4        | 2          | 8         | -  | 6   | 11.3 | 3.3  | M 4  | 7          | 20          | 20          | 10 |
| 16       | -   | 8.5        | 2          | 8         | -  | 6   | 11.3 | 3.3  | M 4  | 7          | 20          | 20          | 10 |
| 20       | -   | 4.6        | 2          | 10        | -  | 5   | 8    | 4.2  | M 5  | 8          | 22          | 22          | 11 |
| 25       | -   | 4.6        | 2          | 10        | 20 | 9   | 11   | 4.2  | M 5  | 8          | 26          | 28          | 14 |
| 32       | -   | 5.7        | 2.5        | 12        | 22 | 8.5 | 12   | 5.05 | M 6  | 10         | 32          | 36          | 18 |
| 40       | -   | 5.7        | 2.5        | 12        | 30 | 9   | 11   | 5.05 | M 6  | 10         | 40          | 40          | 20 |
| 50       | -   | 6.8        | 3.5        | 16        | 35 | 8.5 | 11   | 6.8  | M 8  | 13         | 50          | 50          | 25 |
| 63       | -   | 9          | 3.5        | 16        | 35 | 8.5 | 12.5 | 8.5  | M 10 | 13         | 62          | 62          | 31 |

| Piston Ø | W<br>±0,2 | VD<br>-1 | WH   | ZA<br>±0,2 | ZB<br>±0,8 |  |  |  |  |  |  |  |
|----------|-----------|----------|------|------------|------------|--|--|--|--|--|--|--|
| 12       | 9         | -        | -    | 21         | 31         |  |  |  |  |  |  |  |
| 12       | 9         | -        | -    | 21         | 31         |  |  |  |  |  |  |  |
| 16       | 14        | -        | 6    | 25         | 31         |  |  |  |  |  |  |  |
| 16       | 14        | -        | 6    | 25         | 31         |  |  |  |  |  |  |  |
| 20       | 16        | -        | 9.5  | 24.5       | 34         |  |  |  |  |  |  |  |
| 25       | 19.5      | 3.5      | 11.5 | 31         | 42.5       |  |  |  |  |  |  |  |
| 32       | 24        | 3.5      | 12.5 | 33         | 45.5       |  |  |  |  |  |  |  |
| 40       | 27.3      | 4.5      | 15   | 33         | 48         |  |  |  |  |  |  |  |
| 50       | 32        | 6        | 17   | 32.5       | 49.5       |  |  |  |  |  |  |  |
| 63       | 40        | 6.5      | 17   | 35.5       | 52.5       |  |  |  |  |  |  |  |

1) Min.